

## **REMARKS**

### **Status of the Claims**

The Office Action mailed October 25, 2010 noted that claims 1, 3-6, 8-13, 15-30, 32-34, 36 and 37 were pending and rejected all claims. However, this is not a correct reflection of the currently pending claims.

Claims 1, 3, 6, 8, 11, 15, 16, 20 and 32 are amended. No claims are cancelled. No new claims are added. No new matter is believed to be presented.

It is respectfully submitted that claims 1, 3-6, 8-13, 15-18, 20, 21, 23-26, 28-30, 32-34 36 and 37 are pending and under consideration.

### **Claim Objections**

The Office Action, on pages 2-3, objected to claims 1, 3, 6, 8, 11, 15, 16 and 20. Claims 1, 3, 6, 8, 11, 15, 16 and 20 are amended as suggested and it is respectfully requested that the objections be withdrawn.

### **Rejection under 35 U.S.C. § 103**

The Office Action, on page 3, rejected claims 1, 3-6, 8-13, 15-28, 20-21, 23-26, 28-30, 32-34 and 36-37 under 35 U.S.C. § 103(a) as being unpatentable over Sluijter and Park. Clarification is requested. Applicants believe that "15-28" was incorrect but supposed to be "15-18." Clarification is requested. This rejection is respectfully traversed below.

The Office Action, on page 4, admitted that Sluijter does not discuss all features recited, for example, in claim 1. However, the Office Action, on page 4, looked to Park to cure the admitted deficiencies of Sluijter, in particular, Figure 3 and column 6, lines 20-43 of Park.

Park discusses a scalable audio encoding/decoding method using bit-sliced arithmetic coding. Furthermore, Park notes that the bit-sliced arithmetic coding is used rather than a lossless coding module. Park also discusses a bit packing portion 240 which codes side information and quantized data which corresponds to a base layer having the lowest bitrate and then successively codes side information and the quantized data corresponding to the next enhancement layer of the base layer. This procedure is performed for all layers to generate bitstreams. Further, Park discusses representing the quantized data as binary data comprised of bits of a predetermined same number, and coding sequentially from the most significant bit sequence to the least significant bit sequence. (See Park, column 1, lines 9-15, column 2, lines 24-31, column 6, lines 20-43 and Figure 3).

It is submitted that the Office Action, on pages 4-5 failed to provide a proper reason for combining the teachings of Sluijter and Park. The Office Action merely stated that "...[s]ince Sluijter et al. and Park et al. are analogous in the art because they are from the same field of endeavor, it would have been obvious to one of ordinary skill in the art to modify Sluijter et al. by substituting its encoder with encoder of Park et al. to yield predictable coded results." It is well known that "there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR*, 550 U.S. at \_\_\_, 82 USPQ2d at 1396 quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) The above conclusion fails to meet these requirements, but rather is just a conclusion. Thus, the rejection is improper and should be withdrawn.

The Office Action failed to indicate why it would have been predictable to substitute teachings of Sluijter with teachings of Park and this is specifically required by MPEP 2141. As noted in MPEP 2141, "...[t]he key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious." Here, the Office Action has failed to meet this burden and Applicants are at a disadvantage for responding to the Office Action.

However, the below remarks are provided merely to advance prosecution. It is submitted that claim 1 patentably distinguishes over Sluijter and Park, taken alone and in combination, because nothing cited or found discusses "multiplexing the encoded bandwidth-limited data and the bandwidth extension information." The Office Action, on page 4, cited to "output of Figure 2 and/or col. 6, lines 20-43" regarding the above features, which is actually quite different than the previous Office Action mailed July 15, 2010. The previous Office Action merely provided a citation to Figure 1 of Sluijter. In addition, the instant Office Action did not provide a clear explanation of what the Examiner intended to cite. As best understood, it is believed that the Examiner intended to cite to Figure 2 of Sluijter and column 6, lines 20-43 of Park.

However, Figure 2 and its related discussion in Sluijter fail to discuss or teach "multiplexing the encoded bandwidth-limited data and the bandwidth extension information." Nothing in Sluijter related to Figure 2 discusses "bandwidth extension information." Rather, column 3, lines 10-30 of Sluijter, merely state that an input signal is split into a low frequency range portion and a high frequency range portion. There is a difference signal which is determined by the subtracter, but this is not "bandwidth extension information" that is "information necessary for restoring the sliced portion of the digital data." Rather, nothing in Sluijter discusses "multiplexing the encoded bandwidth-limited data and the bandwidth extension

information.” All of Figure 2 on Sluijter, in fact, is merely related to the low pass filter 27, and would as a result be entirely unrelated to “the encoded bandwidth-limited data and the bandwidth extension information” which as recited in claim 1 specifically as “a portion of the digital data in a high frequency band with a remaining portion of the digital data being the bandwidth-limited data.”

In other words, coding is not performed on the generated bandwidth extension information, and the generated bandwidth extension information is multiplexed with the encoded bandwidth-limited data. Sluijter merely discusses that a signal having a low frequency range which is processed by a first coder 9 and a signal having a high frequency range is processed by a second coder 11, i.e. an LPC coder. (See Sluijter, column 2, lines 56-64).

Additionally, as best understood, Park in column 6, lines 20-43 also fails to teach “multiplexing the encoded bandwidth-limited data and the bandwidth extension information.” Park only discusses coding side information and quantized data for all layers according to the bit packing portion 240. Nothing in this paragraph discusses “multiplexing the encoded bandwidth-limited data and the bandwidth extension information.” In particular, Park is notably silent regarding bandwidth extension information. The Office Action appears to have made an interpretation of “side information” as discussed in column 6, lines 20-43 and come to the improper conclusion that “bandwidth extension information” reads on “side information.” However, this is an unsupported conclusion. Nothing in column 6, lines 20-43 says that “side information” is used to extend the bandwidth of bandwidth limited data which is defined in claim 1. This is further supported by Figure 10A-10D of the instant specification which show that the BWE decoder is able to create missing data that has been sliced off.

Even further, claim 1 recites “bandwidth-extension-encoding the digital data, outputting bandwidth-limited data, and generating bandwidth extension information.” Sluijter discusses that a splitter 7 splits input signal 19 into a signal that has a low frequency range and a high frequency range. (See Sluijter, column 2, lines 56-64). Dividing an input signal into two frequency range signals is distinguishable from “bandwidth-extension-encoding the digital data, outputting bandwidth-limited data, and generating bandwidth extension information.”

Therefore, claim 1 patentably distinguishes over Sluijter and Park, taken alone and in combination.

Claim 3 patentably distinguishes over Sluijter and Park, taken alone and in combination, because nothing cited or found discusses “multiplexing the encoding bandwidth-limited data and the bandwidth extension information.”

Claim 6 patentably distinguishes over Sluijter and Park, taken alone and in combination, because nothing cited or found discusses “multiplexing the encoded bandwidth-limited audio data and the bandwidth extension information.”

Claim 8 patentably distinguishes over Sluijter and Park, taken alone and in combination, because nothing cited or found discusses “multiplexing the encoded bandwidth-limited audio data and the bandwidth extension information.”

Claim 11 patentably distinguishes over Sluijter and Park, taken alone and in combination, because nothing cited or found discusses “demultiplexing an input bitstream and sampling bandwidth-limited data that is encoded into a hierarchical structure having a base layer and at least one enhancement layer and bandwidth extension information.” Furthermore, the rejection found on page 8 is improper. The Office Action on page 8 merely cited to receiver 5 in Sluijter and Figure 4 of Park without indicating why these are believed to teach all features of claim 11. Applicants should not be required to guess as to why the features of claim 11 have been rejected.

Claim 15 patentably distinguishes over Sluijter and Park, taken alone and in combination, because nothing cited or found discusses “demultiplexing an input bitstream and sampling bandwidth-limited data that is encoded into a hierarchical structure having a base layer and at least one enhancement layer and bandwidth extension information.”

Claim 16 patentably distinguishes over Sluijter and Park, taken alone and in combination, because nothing cited or found discusses “demultiplexing an input audio bitstream and sampling bandwidth-limited audio data that is encoded into a hierarchical structure having a base layer and at least one enhancement layer and bandwidth extension information.”

Claim 20 patentably distinguishes over Sluijter and Park, taken alone and in combination, because nothing cited or found discusses “demultiplexing an input audio bitstream and sampling bandwidth-limited audio data that is encoded into a hierarchical structure having a base layer and at least one enhancement layer and bandwidth extension information.”

Claim 21 patentably distinguishes over Sluijter and Park, taken alone and in combination, because nothing cited or found discusses “a multiplexer that multiplexes the encoded bandwidth-limited data and the bandwidth extension information.”

Claim 23 patentably distinguishes over Sluijter and Park, taken alone and in combination, because nothing cited or found discusses “a multiplexer that multiplexes the encoded bandwidth-limited data and the bandwidth extension information, wherein the digital data in the

high frequency band is not included in the bandwidth extension information.”

Claim 26 patentably distinguishes over Sluijter and Park, taken alone and in combination, because nothing cited or found discusses “a multiplexer that multiplexes the encoded bandwidth-limited audio data and the bandwidth extension information.”

Claim 28 patentably distinguishes over Sluijter and Park, taken alone and in combination, because nothing cited or found discusses “a multiplexer that multiplexes the encoded bandwidth-limited audio data and the bandwidth extension information.”

Claim 30 patentably distinguishes over Sluijter and Park, taken alone and in combination, because nothing cited or found discusses “a demultiplexer that demultiplexes an input bitstream and samples bandwidth-limited data that is encoded into a hierarchical structure having a base layer and at least one enhancement layer and bandwidth extension information, wherein the bandwidth-limited data is a remaining portion of digital data after digital data in a high frequency band has been sliced off, and wherein the bandwidth extension information is side information necessary for restoring the sliced portion of the digital data.”

Claim 32 patentably distinguishes over Sluijter and Park, taken alone and in combination, because nothing cited or found discusses “a demultiplexer that demultiplexes an input bitstream and samples bandwidth-limited data that is encoded into a hierarchical structure having a base layer and at least one enhancement layer and bandwidth extension information, wherein the bandwidth-limited data is a remaining portion of digital data after digital data in a high frequency band has been sliced off, and wherein the bandwidth extension information is side information necessary for restoring the sliced portion of the digital data.”

Claim 34 patentably distinguishes over Sluijter and Park, taken alone and in combination, because nothing cited or found discusses “a demultiplexer that demultiplexes an input audio bitstream and samples bandwidth-limited audio data that is encoded into a hierarchical structure having a base layer and at least one enhancement layer and bandwidth extension information, wherein the bandwidth-limited data is a remaining portion of audio data after audio data in a high frequency band has been sliced off, and wherein the bandwidth extension information is side information necessary for restoring the sliced portion of the digital data.”

The dependent claims depend from the above-discussed independent claims and are patentable over the cited references for the reasons discussed above. The dependent claims also recite additional features not taught or suggested by the cited references. For example, claim 4 recites “the encoded bandwidth-limited data and the bandwidth extension information is multiplexed in such an order that a portion of the encoded bandwidth-limited data corresponding

to the base layer is located, the bandwidth extension information is located, and portions of the bandwidth-limited data corresponding to the remaining enhancement layers are located." In particular, the Office Action, on page 7, admitted that Sluijter does not discuss the above features, but cited merely to "Figure 3" of Park. However, nothing in Figure 3 of Park is related to multiplexing in any sort of order. Figure 3 is silent regarding multiplexing. Therefore, it is submitted that the rejection should be withdrawn and further that the dependent claims are independently patentable over the cited references.

Withdrawal of the rejection is respectfully requested.

### Summary

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

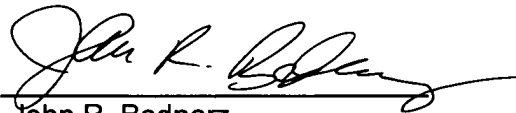
Respectfully submitted,

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Date: \_\_\_\_\_

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